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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/115,492	07/14/98	TUTTLE M	91-579.9

IM52/0511

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EXAMINER
KOEHLER,R

ART UNIT	PAPER NUMBER
1734	5

DATE MAILED: 05/11/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/115,492	Tuttle, et al.
Examiner	**Group Art Unit**
Robert Koehler	1734

☒ Responsive to communication(s) filed on *July 14, 1998 and February 23, 1999 (Prel. Amdts.)* .

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *25-39 and 42-50* is/are pending in the application.

Of the above, claim(s) *31-39 and 48* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *25-30, 42-47, 49, and 50* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims *25-39 and 42-50* are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948 (Substitute)

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on *Feb 23, 1999* is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *4.*

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948 (Substitute)

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 25 to 30, 42 to 47, 49, and 50, drawn to a method of manufacturing a radio frequency transceiver and the RFID transceiver product, classified in class 156, subclass 292.

II. Claims 31 to 34 and 48, drawn to a method of coupling an antenna to a radio frequency identification transceiver and the RFID transceiver product including an antenna coupling circuitry, classified in class 343, subclass 700+.

III. Claims 35 to 39, drawn to a method of manufacturing and storing a plurality of miniature RFID transceivers and the related apparatus, classified in class 53, subclass 111+.

The inventions are distinct, each from the other because:

Inventions I. and III. are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a singular RFID transceiver which can be packaged in a single, separate enclosure, and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the

species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I. and II. are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the RFID transceiver can be enclosed by any barrier material (e.g., silicon oxide or silicon nitride) which does not impair the workings of an enclosed antenna. In contrast, the subcombination (Group II.) requires that the enclosure be constructed of an "electrically conductive barrier material." The subcombination has separate utility such as a sacrificial anode when the enclosed transceiver is attached directly to another metallic structure to be galvanically-protected.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Robert Stern, applicants' attorney, on April 26, 1999, a provisional election was made with oral traverse to prosecute the invention of Group I.,

claims 25 to 30, 42 to 47, 49, and 50. Affirmation of this election must be made by applicant in replying to this Office action. Claims 31 to 39 and 48 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Evaluations of the level of ordinary skill in the art requires consideration of such factors as various prior art approaches, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, and failure of others.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The evidence of record

including the references and/or the admissions are considered to reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 25 to 30, 42 to 47, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anders, et al. (U.S. Pat. No. 4,827,395) in view of Holland (U.S. Pat. No. 4,746,830) and Christenson (U.S. Pat. No. 4,882,294) or Nath, et al. (U.S. Pat. No. 4,746,618).

Anders, et al. teaches a process for manufacturing a transceiver **13** comprising the steps of attaching a chip to a micro-battery using an antenna; see lines 61 to 63 in column 8. Anders, et al. does not specifically teach the placement of the transceiver chip and battery between two covers having a barrier material and sealing the covers together. Holland teaches a process for making a transceiver comprising the steps of providing an interrogator **10** having an antenna **11** for transmitting radio frequency signals; see lines 34 to 39 in column 5. A cover **29** comprising silicon dioxide or a polymeric material interfaces with the piezoelectric substrate while protecting the circuit; see lines 22 to 32 in column 7. Also, Holland teaches that the cover plate **29** may be a

laminate. Christenson or Nath, et al. teaches a method for depositing a barrier material on an electronic device. For example, Christenson at lines 44 to 50 in column 8 teaches a barrier layer **71** comprising silicon oxide or silicon nitride. Nath, et al. teaches a process for enclosing batteries between protective laminae **72** which may either be a polymeric film or a deposited plasma of silicon dioxide, silicon nitride, or other similar compositions; see lines 38 to 47 in column 11.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the teaching by Anders, et al. concerning the production of a transceiver device as suggested by the protective polymeric or silicon barrier materials of Holland because Holland recognizes the desirability of employing a protective cover having a conductive barrier material to propagate radio frequency waves in a transceiver device. Also, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the combination of Anders, et al. and Holland by the teaching of Christenson or Nath, et al. concerning deposition of silicon oxide, silicon dioxide, or silicon nitride onto a transceiver device because Holland teaches that it is beneficial to provide a barrier material on a transceiver cover. Also, Holland suggests employing polymeric materials as barrier layers. Polyethylene and fluorohalocarbons are well-known materials for having the properties taught as desirable by Holland, and would have been obvious to use as barrier materials. Furthermore, applicants' claimed deposition thickness ranges would have been obvious to one skilled in the art during the course of routine experimentation.

Drawings

This application has been filed with **informal drawings** which are acceptable for examination purposes only. They have not been reviewed by a PTO draftsperson at this time. **Formal drawings** will be required when the application is allowed. Applicants' letter of July 14, 1998 stated that 12 sheet(s) of **informal drawings** were being submitted with the application papers.

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on February 23, 1999 have been approved by the Examiner.

The Patent and Trademark Office no longer makes drawing changes. See 1017 O.G. 4. It is applicant's responsibility to ensure that the drawings are corrected. Corrections must be made in accordance with the instructions below.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. **Correction of Informalities** -- 37 CFR 1.85; 1097 O.G. 36

New formal drawings must be filed with the changes incorporated therein. The art unit number, application number (including series code) and number of drawing sheets should be written on the reverse side of the drawings. Applicant may delay filing of the new drawings until receipt of the "Notice of Allowability" (PTOL-37 or PTO-37). If delayed, the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory

period set for reply in the "Notice of Allowability" to avoid extension of time fees. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a) for filing the corrected drawings (but not for payment of the issue fee). The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the three month shortened statutory period set in the "Notice of Allowability" (PTO-37). Within that three month period, two weeks should be allowed for review of the new drawings by the Office. If a correction is determined to be unacceptable by the Office, applicant must arrange to have an acceptable

correction re-submitted within the original three month period to avoid the necessity of obtaining an extension of time with extension fees. Therefore, applicant should file corrected drawings as soon as possible.

Failure to take corrective action within the set (or extended) period will result in **ABANDONMENT** of the application.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Robert Koehler whose telephone number is **(703) 308-1974**. The Examiner can normally be reached on Tuesday to Friday from 8:30 AM to 6:00 PM. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. David Simmons, can be reached on (703) 308-1972. The fax phone number for this Art Unit is (703) 305-7115. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center receptionist whose telephone number is (703) 308-0661.

R R Koehler RRK.

May 9, 1999

David A. Simmons
Supervisory Patent Examiner
Technology Center 1700